

Prior Assessments of Fish Communities on the Flower Garden Banks

Pattengill Dissertation

Citation: Pattengill, C.V. (1998) The structure and persistence of reef fish assemblages of the Flower Garden Banks National Marine Sanctuary. Ph.D. Dissertation. Texas A & M University. pp. 164.

Time Period: 94 – 97

Location: Surveyed E & WFGB; within 100m of mooring buoy 2 EFGB and buoy 5 WFGB; these areas were considered representative of each bank

Technique: modified stationary point count (6.5m radius, Bohnsack and Bannerot 1986); roving diver technique (Pattengill 1995); site selected by random compass heading and fin kicks

Sampling Frequency: 6 cruises; 6 divers – 4 surveys/diver/bank/trip (~24 surveys/bank/trip). These are considered replicates.

Data: abundance on all species observed for stationary diver; log scale abundance for roving diver no size

Results: after 13 dives utilizing either technique >90% of species are recorded; between 14-19 samples looking at SE & number of species or number of fish

Dennis Thesis

Citation: Dennis, G.D. III (1985) Reef fish assemblages on hard banks in the northwestern Gulf of Mexico. M.S. Thesis. Texas A & M University. pp. 164.

Time Period:

Location: Surveyed E & WFGB

Technique: submersible transects from crest to depth; scuba roving diver; accounts of records of reef fish taken by hook and line, ichthyocides, spear, and trawl repeated are reported in systematic species account

Sampling Frequency:

Data: size, abundance (this is standardized by time at a given depth since area was not calculable)

Results: observations were made on species presence and associations with depth and habitat type

MMS Gittings

Citation: Gittings, S.R., G.S. Boland, K.J.P. Deslarzes, D.K. Hagman, B.S. Holland. (1993). Long-term monitoring at the East and West Flower Garden Banks. OCS Study MMS 92-0006, US Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans. 206 pp.

Time Period: 1989-1991

Location: Surveyed E & WFGB; 100 x 100m study sites

Technique: Video transects

Sampling Frequency: 6 cruises, fall & summer each year, two transects/bank/cruise, each transect considered a replicate

Data: Large bodied (approx 15 cm in length) fish were enumerated

Results: significant seasonal differences were noted at the EFGB

MMS Dokken

Citation: Dokken, Q.R., I.R. MacDonald, J.W. Tunnell, C.R. Beaver, G.S. Boland, and D.K. Hagman. (1999). Long-term monitoring of the East and West Flower Garden Banks, 1996-1997. OCS Study MMS 99-0005, US Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana. 101 pp.

Time Period: 1996-1997

Location: Surveyed E & WFGB; 100 x 100m study sites

Technique: Video transects

Sampling Frequency: Two cruises, two transects/bank/cruise

Data: Large bodied (approx 15 cm in length) fish were enumerated

Results: comparisons were made with Gittings earlier work

AGRRA

Citation: Pattengill-Semmens, C., S.R. Gittings, T. Shyka. (2000). Flower Garden Banks National Marine Sanctuary: A rapid assessment of coral, fish, and algae using the AGRRA protocol. Marine Sanctuaries Conservation Series MSD-00-3. US Department of Commerce, National Oceanic and Atmospheric Administration, Marine Sanctuaries Division, Silver Spring, MD. 15 pp.

Time Period: 70s & 80s; Scuba (1978 – 1981)

Location: Surveyed E & WFGB

Technique: Belt transects and Roving Diver

Sampling Frequency: One trip; 12 transects/bank (2m X 30m)

Data: On transect: selected taxa were enumerated; size recorded in 5 – 10 cm bins. Roving diver: all species encountered identified and assigned to log scale abundance estimate.

Results:

Boland

Citation: Boland, G.S., B.J. Gallaway, J.S. Baker, G.S. Lewbell. (1983). Ecological effects of energy development on reef fish, ichthyoplankton, and benthos populations in the Flower Garden Banks of the northwestern Gulf of Mexico: Volume III, Ecological effects of energy development on reef fish of the Flower Garden Banks. US Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Galveston, TX. 466 pp.

Time Period: 1980 - 1982

Location: Surveyed E & WFGB

Technique: Hook and line; traps; divers; trawls; towed camera

Sampling Frequency: 8 cruises

Data: Size data and area recorded from video transects.

Results: Examined depth and habitat preferences

Bright

Citation: Bright, T.J., C.W. Cashman. (1974). Fishes p. 339-409. In Biota of the West Flower Garden Bank eds. T.J.Bright and L.H. Pequegnat. Gulf Publishing Co. Houston, TX 435 pp.

Time Period: 1970 - 1972

Location: WFGB

Technique: Collections and observations based on hook and line; traps; divers; dipnets, trawls; towed camera; rotenone; submersible

Sampling Frequency: 17 cruises

Data: Size data and area recorded from video transects.

Results: Some notes on depth and habitat preferences

Dennis & Bright

Citation: Dennis, G.D., T.J. Bright. (1988). Reef fish assemblages on hard banks in the northwestern Gulf of Mexico. Bulletin of Marine Science. 43(2): 280-307.

Time Period: 1970 - 1972

Location: E & WFGB

Technique: submersible transects from crest to depth; diving

Sampling Frequency:

Data: abundance (this is standardized by time at a given depth since area was not calculable)

Results: observations were made on species presence and associations with depth and habitat type. Comparisons made with other hard bank communities

REEF

Citation: Pattengill-Semmens, C.V., B.X. Semmens. (1998). An analysis of fish survey data generated by nonexpert volunteers in the Flower Garden Banks National Marine Sanctuary. Gulf of Mexico Science. 2: 196-207.

Time Period: 1996 - present

Location: E & WFGB

Technique: roving diver

Sampling Frequency: biannually to annually

Data: all species encountered identified and assigned to log scale abundance estimate

Results: observations made on differences between “expert” and non-expert data collectors.

PBS&J

Citation:

Time Period: 2003 - present

Location: Surveyed E & WFGB; 100 x 100m study sites

Technique: point counts

Sampling Frequency: annually; 24 counts/bank

Data: size data (mean, max, min)

Results: